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| 10/667,692      | 09/22/2003  | Edward Barkan        | 7157-356            | 9240             |

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| EXAMINER |
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WALSH, DANIEL I

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2876

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/667,692

Applicant(s)

BARKAN, EDWARD

Examiner

Daniel I Walsh

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-14 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-14 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

1. Claim 1 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 9 of prior U.S. Patent No. 6,631,845. This is a double patenting rejection.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2-8 and 10-14 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,631,845 in view of US 5,343,029. Claims 1-14 of the '845 patent teach all the

limitations of claims 1-8 and 10-14 of the currently pending application. However, the currently pending application has incorporated the limitations of claim 9 of the '845 patent into claim 1 of the current application, with claims 2-8 and 10-14 depending on claim 1. Therefore, the '845 patent, though it teaches all the claimed limitations, does not include a matching dependency where the limitations of claim 9 are incorporated into every claim, as in the current application. However, the examiner notes that the limitation of claim 9 of the '845 patent is well known and obvious. The Examiner cites Katoh et al., which teaches that a laser diode is protected from being overheated by cooling of the light source with the airflow circulated by the rotation of the rotary polygonal mirror. Accordingly, in light of Katoh et al., the Examiner notes that it is well known and obvious to use air from a rotating mirror to cool a light source in a scanner.

2. Claims 20-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7, 13, 16 and 17 of U.S. Patent No. 6,631,845. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are obvious in light of the claims of the '845 patent. Claim 13 of the '845 patent teaches singular reflection of the scan lines as per claim 20 of the current application, claim 16 teaches vertical and horizontal axis of rotations of the two motors, as per claim 21-22 of the current application, and claim 17 of the '845 patent teaches operating at less than full power as per claim 24 of the current application. Further, it is obvious to the Examiner that the axis of independent motors in a bi-window scanning system are substantially normal to each other, that lights are focused differently,

and the lasers operate at less than full power, as is well known and conventional/obvious in the art.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 6, 8, 10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bobba et al. (US 5,475,207) in view of Katoh et al. (US 5,343,029).

Re claim 1, Bobba et al. teaches a scanning device for reading bar code symbols comprising a housing having a substantially horizontal surface with a substantially horizontal window and a substantially vertical surface having a substantially vertical window (abstract lines 10+) and FIGs. 1-2, and 20, where the windows and surface are generally interpreted as vertical and horizontal, as disclosed in the abstract. Bobba et al.

teaches a first polygon mirror 292 and first stationary mirror array 60. Bobba et al. teaches the use of a common motor for the polygon mirrors, but teaches that separate motors can be used to power holographic discs (col 8, lines 50+). The construction of formerly integral structures into various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Accordingly, it is therefore apparent to use separate motors to power the separate/independent polygon mirrors of FIG. 13, especially since the polygon mirrors and holographic discs are used for similar purposes. Bobba et al. teaches a first light source 76 for generating a first light beam that reflects off the first polygon mirror to project a first plurality of scan lines through the substantially horizontal window. Bobba et al. teaches a second polygon mirror 294 and a second stationary mirror array 80. Bobba et al. teaches a second light source 56 for generating a second light beam that reflects off the second polygon mirror to project a second plurality of scan lines through the substantially vertical window. Bobba et al. teaches "The two light generation and detection schemes are schematically designated as elements 286, 288 and may comprise any suitable single or dual light source and any suitable light detector configuration such as those already described in the above embodiments (col 7, lines 37+), which therefore either includes single or dual detector means (re detector 219 or detectors 269,279). Therefore, Bobba et al. teaches the use of a plurality of sensors (dual detectors). Further, it is well known and obvious that light/optical detectors detect the intensity of light reflected from the indicia/barcode and generate electrical signals proportional to the intensity of the light received, as is conventional in the art of scanning systems, to produce, predictable and accurate results.

Re claim 2, Bobba et al. teaches the use of a single microprocessor for decoding the electrical signals from the sensors through microprocessor 135 which decodes the electrical signals from the top and bottom sensors for example, to piece together partial scans (col 9, lines 14+).

Re claim 3, Bobba et al. teaches the use of signal processing circuitry through signal processing units 125 and 127. It is well known and obvious in the art of printed circuit boards and computers/electronics that circuit boards such as motherboards include a microprocessor and signal processors (such as in a computing device). Such use of a circuit board with processor and dsp circuitry is well known and conventional in the art, and is accepted as reliable and to produce expected results.

Re claim 6, Bobba et al. teaches that the scan lines scan the front and back of a package in the direction of travel across the scanner through “The three mirror arrays generate three sets of scan lines so as to scan the bottom and all lateral sides of an object being passed through the scan volume. Further, it is well known and conventional in the art that scanning systems exist which scan a plurality of sides of the item, as its passed through a scanning volume (re Bridgelall et al. as cited in Office Action of Application 09/824,961)

Re claim 8, through Bobba et al. is silent to the powering of the sources, at the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art that the sources can operate at different power levels depending on the power source used, the strength of the laser, etc., as such operating levels of sources is well known and obvious, to extend source life whether it be laser, leds, etc., or to conform to the design constraints of the scanning system, such as that taught by Rousteai et al. (US

5532467) where it is taught that depending on the distance, the power of the source/leds are adjusted, to conserve power. Further, it is well known that by not powering lasers at full power, that longevity can be increased. Accordingly, it is well known that not pushing electrical devices to their maximum operating speeds/power levels/intensity, etc. increases product life.

Re claim 10, Bobba et al. teaches that the light sources are situated low in the housing, through FIG. 13, which shows the sources below the polygon mirrors.

Re claim 12, Bobba et al. teaches that the polygon mirrors are situated close to the mirror arrays, since it is taught that they are all in the same housing, and thus interpreted to include "close". Therefore, it is understood, that as a predictable result of this, a scan pattern can grow rapidly.

Re claim 13, it is understood that the scan lines are reflected only once off the mirror arrays on their way out their respective windows through "the outgoing beam is directed across the upper mirror array 60 and then reflected out through the upper window 25 to achieve a desired scan pattern" (col 4, lines 37+). Though Bobba et al. teaches the reflected light from the object takes the same path (in reverse) the reflected light is not the same as the plurality of scan lines that left the window.

Bobba et al. is silent to circulating air by at least one of the first polygon mirror and second polygon mirror to cool at least one of the light sources.

Katoh et al. teaches cooling light sources in a scanner by the airflow circulated by the rotation of the polygon mirror.

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Bobba et al. with those of Katoh et al.



One would have been motivated to do this in order to cool the sources to preserve their life.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bobba et al./Kato et al., as applied to claim 1 above, and further in view of Rando (US 5,869,827).

The teachings of Bobba et al./Kato et al. have been discussed above.

Bobba et al./Kato et al. fails to teach different focusing of the sources. However, it is understood by the Examiner that the sources are focused differently since they are directed to/focused on different areas.

Further, Rando teaches the sources are focused differently (see col 18, lines 6+).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Bobba et al./Kato et al. with those of Rando.

One would have been motivated to do this to provide a scanning system with adjustable focusing to define an optical scanning path or focal distance for an accurate scanning, also noting that the sources are obviously focused to different areas due to their orientation (vertical window/horizontal window, and the resulting scanning pattern).

5. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Bobba et al./Kato et al., as applied to claim 1 above, and further in view of Kato et al. (US 5,206,491), as cited by the Applicant.

The teachings of Bobba et al. have been discussed above.

Bobba et al. fails to teach that the second polygon mirror is situated above the second mirror array. However, it is understood that with a two-polygon mirror configuration as taught through FIG. 13, that the preferred embodiment of the invention would include the second polygon mirror above the mirror array.

Katoh et al. teaches a single polygon mirror optical system, but teaches via FIG. 3B, that mirrors 21A/B, which are interpreted as stationary mirror arrays, are below the polygon spinner.

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Bobba et al. with those of Katoh et al.

One would have been motivated to do this, in order to have a means of reflecting single beams at a time to a focused area, as is well known and conventional in the art, and that reduces the amount of parts (sophisticated array of mirrors).

6. Claim 20-21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bobba et al./Katoh et al., further in view of Katoh et al. (US 5,206,491), as cited by the Applicant.

The teachings of Bobba et al./Katoh et al. have been discussed above. The limitations of claims 23 and 24 have been taught above re claims 7 and 8. Bobba et al./Katoh et al. are silent to the second plurality of scan lines reflecting only once off the second stationary mirror array prior to being projected through the vertical mirror.

The examiner maintains that Bobba et al. teaches that scan lines are reflected only once, but also presents the teachings of Katoh et al. ('491), to speed prosecution.

Katoh et al. ('491) teaches singular reflection (FIG. 3B).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Bobba et al./Kato et al. with those of Kato et al. ('491).

One would have been motivated to do this in order to use a well known and simple means of producing a scanning through vertical and horizontal windows, as is well known and conventional in the art.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Walsh whose telephone number is (571) 272-2409 (as of January 15, 2004). The examiner can normally be reached between the hours of 7:30am to 4:00pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone numbers for this Group is (703) 872-9306, (703) 308-7724, or (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [daniel.walsh@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set for the in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



DW  
3/19/04



KARL D. FRECH  
PRIMARY EXAMINER